

Invited Speaker	Title
Hiroyuki Shimizu, Taiyo Yuden Co., Ltd.	Antiferroelectric - Ferroelectric Phase Switching in NaNbO ₃ -Based Ceramics
Jing-Feng Li, Tsinghua University	Synthesis and Piezoelectricity of Lead-free (K, Na)NbO ₃ Nanoscale Single Crystals
Derek Sinclair, University of Sheffield	The Defect Chemistry of Na _{1/2} Bi _{1/2} TiO ₃ : a bipolar perovskite
Ruiping Wang, AIST	Niobate lead-free piezoelectric ceramics exhibiting the MPB and their application to AE sensor
Jianguo Zhu, Sichuan University	High Piezoelectric Properties of KNN-based Piezoelectric Ceramics
Fei Li, Xi'an Jiaotong University	Piezoelectric Activity in Perovskite Ferroelectric Crystals
Kyle Webber, Technische Universität Darmstadt	Tailoring Lead-Free Ferroelectric Composites
Ho-Yong Lee, Sunmoon University	Lead-free Piezoelectric Single Crystals [(Ba,Ca)(Zr,Ti)O ₃] of $k_{33} > 0.85$
Vojislav Mitic, Institute of Technical Sciences of SASA	Contribution to Heywang fractal nature model generalization on the way to electronics circuits intergranular relations
Jiagang Wu, Sichuan University	High Strain and Large Piezoelectricity in Potassium-Sodium Niobate Lead-free Ceramics
Masahiko Kimura, Murata Manufacturing Co., Ltd.	Study of Textured Piezoelectric Ceramics Fabricated by Magnetic Alignment
Scott Beckman, Iowa State University	Special Quasirandom Structures of K _{0.5} Na _{0.5} NbO ₃
Joseph Perry, Georgia Tech	Organically Modified Silica Hybrid Sol-gel Capacitors with High Energy Density and Efficiency
Boris Yakobson, Rice University	2D materials canvas: carbon, h-BN, metal-disulfides, and topological defects therein
Krishna Rajan, Iowa State University	Harnessing Big Data for Computational Design of Ceramics
Vidvuds Ozolin, University of California, Los Angeles	Computational design of earth-abundant thermoelectrics
Kuang Yu, Princeton University	First-Principles-Derived Strategy to Stabilize Kesterite Phase CZTS for High Performance Solar Cells
Volker Blum, Duke University	First-Principles, All-Electron Approach to Electronic Interfaces: Challenges and Opportunities
Jerry Bernholc, NC State University	Electronic Structure and Electron Transport in Carbon-Based Nanosystems
Nicole Benedek, The University of Texas at Austin	In search of simple design principles for the transport properties of complex oxides
Changwon Park, Oak Ridge National Laboratory	Electronic properties of bilayer graphenes strongly coupled to interlayer stacking and the external field
Feng Liu, University of Utah	Epitaxial Growth of Graphene-Like Overlayer on Semiconductor Surface towards Room-Temperature Topological Quantum States
Turab Lookman, Los Alamos National Laboratory	Information-driven approach to materials design
Ji Zhou, Tsinghua University	Dielectric metamaterial as a route to high performance functional materials
Steven May, Drexel University	Electronic and optical properties of epitaxial La _{1-x} Sr _x FeO ₃ and La _{1-x} Eu _x FeO ₃ films

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Alexei Gruverman, University of Nebraska-Lincoln	Electromechanical coupling and interface control of resistive switching in ferroelectric heterostructures
Mark Losego, Georgia Institute of Technology	Sub-Nanometer Oxide Coatings for Improved Stability of Molecularly Sensitized Devices
Jeff Sakamoto, University of Michigan	Superionic conducting ceramic electrolyte enabling Li metal anodes and solid state batteries
Yu Zhong, Florida International University	In Situ Phase Transformation of Scandia-Zirconia by High Temperature X-ray Diffraction
Alastair Cormack, Alfred University	Correlated Sodium Transport in β'' -alumina
Daniel Feezell, University of New Mexico	Light-Emitting Diodes Based on Ordered Arrays of III-Nitride Core-Shell Nanostructures
Serge Nakhmanson, University of Connecticut	Complex-oxide multilayers by design: a treasure trove of unusual ferroic functionalities
Bin Xu, University of Arkansas	Finite-temperature Properties of Rare-Earth-Substituted BiFeO ₃ Multiferroic Solid Solutions
Bharat Jalan, University of Minnesota	MBE Growth, Heterostructure Engineering and Electronic Transport Properties of Complex Oxides via Stoichiometry Control
S. Pamir Alpay, University of Connecticut	Electrothermal Properties of Ferroelectric Multilayers
Ming-Jye Wang, Academia Sinica	Fe-vacancy in FeSe-based superconductors
Amalia Ballarino, CERN	HTS for use in Accelerator Facilities
Sergey Bud'ko, Ames Laboratory/Iowa State University	Combined effects of transition metal (Co, Ni, Rh) substitution, annealing/quenching and hydrostatic pressure on superconductivity and phase
Kazimierz Conder, Paul Scherrer Institute	Superconductivity in alkali metal intercalated iron chalcogenides
Xiaolong Chen, Institute of Physics, Chinese Academy of Sciences	Structural evolution in KxFe2-ySe2: Unstable phase, superconducting phases, and vacancy phases
M Brian Maple, University of California, San Diego	Superconductivity in BiS ₂ -based compounds
Dirk Johrendt, Ludwig-Maximilians-Universität München	Coexistence of 3d-ferromagnetism and superconductivity in [(Li _{0.8} Fe _{0.2})OH]FeSe
Satoshi Demura, Tokyo University of Science	Superconductivity and the magnetism in BiS ₂ -based superconductors
Paul C. W. Chu, University of Houston	The Meissner and Mesoscopic Superconducting States in the Ultrathin FeSe-Films
Shane Cybart, UC San Diego	Josephson and Quasi-particle Tunneling in High-Transition-Temperature Superconductor Josephson Junctions from Ion Beam Irradiation
Xingjiang Zhou, Institute of Physics, Chinese Academy of Sciences	Electronic Structure and High Temperature Superconductivity of FeSe/SrTiO ₃ Films
Jian Wang, Peking University	Direct evidence of the thinnest high temperature superconductor
Akira Iyo, AIST	Recent discovery of new superconductors containing pnictogen atoms
Sören Boyn, Unité Mixte de Physique CNRS/Thales	Ferroelectric Memristors for Neuromorphic Computing
John Daniels, UNSW Australia	Experimental observations of grain-scale interactions in electroceramics: The difficult length scae

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Yu Zhong, Florida International University	Thermodynamic investigation of the perovskite electrical conductivity
Daisuke Kan, Kyoto University	Phase control of a transition metal oxide through interface engineering of oxygen displacement
Lane Martin, University of California, Berkeley	New Horizons in Strain Control of Ferroelectrics: Manipulating Chemistry and Domain Structures for New Phenomena
Julia Glaum, UNSW Australia	Relaxor-ferroelectric transition in BNT-based piezoceramics
Xavier Moya, University of Cambridge	Multicaloric perovskite oxides
Dong Jik Kim, University of Nebraska-Lincoln	Room-Temperature Ferroelectricity of Epitaxially Stabilized Hexagonal TbMnO ₃ Films
George Nolas, University of South Florida	Inorganic Clathrates and Other Open-Framework Low Thermal Conductivity Materials
Maarit Karppinen, Aalto University	Nanostructuring of Oxide Thermoelectrics by Atomic/Molecular Layer Deposition
Hanns-Ulrich Habermeier, MPI-FKF	Thermoelectric Properties of PLD Grown Ca ₃ Co ₄ O ₉ Thin Films
Ali Shakouri, Purdue University	Electronic and lattice thermal conductivity in nanostructured thermoelectric materials
Hirohichi Ohta, Hokkaido University	Thermopower enhancement of two-dimensional electron gas in oxide semiconductors
Jon Ihlefeld, Sandia National Laboratories	Room Temperature Voltage Tuning of Thermal Conductivity in Ferroelectric Thin Films
Paul Salvador, Carnegie Mellon University	Combinatorial Substrate Epitaxy: A New Route for Stabilizing Metastable Electronic Ceramics
Carl Thompson, Massachusetts Institute of Technology	The Stability of Retracting Film Edges During Solid-State Dewetting
Gerhard Dehm, Max Planck Institut für Eisenforschung	Probing deformation mechanisms of metallic structures relevant for electronic applications
Gregory Rohrer, Carnegie Mellon University	Combinatorial substrate epitaxy: a high throughput method to determine orientation relationships for electronic ceramics
Yu Zhong, Florida International University	Application of Computational Thermodynamics on Long Term Degradation of Solid Oxide Fuel Cell
Jian Luo, UCSD	Stabilization of Nanometer-Thick Surficial Films and Their Applications in Battery Materials
Eric Chason, Brown U	A kinetic picture for understanding residual stress in thin films: real-time experiments and modeling
Dominique Chatain, CNRS - Aix-Marseille University	A new mechanism of hetero-epitaxy and orientation relationships
Suk Jun Kim, KOREATECH	Novel application of metallic glass: Ag paste for solar cell